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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,937	12/29/2003	Jeong-Su Jeong	51876P544	7087

8791 7590 12/29/2004

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EXAMINER
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LE, THONG QUOC

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/747,937	JEONG, JEONG-SU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thong Q. Le	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8-10 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. Claims 1-14 are presented for examination.

#### *Priority*

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4,7,11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Taira et al. (U.S. Patent No. 6,081,468).

Regarding claims 1, 7 Taira et al. disclose a self refresh control apparatus (Figure 1), for use in a semiconductor memory device, comprising:

a self refresh entry unit (Column 10, lines 55-60) having at least one clock buffer for generating a self refresh entry signal response to an external control signal, wherein the clock buffer generates a clock signal in response to an external clock signal and a clock buffer enable signal ;

a self refresh exit unit (Column 10, lines 61-65) for generating a first self refresh exit signal in response to the external control signal and generating a second self refresh exit signal synchronized with the clock signal;

a lock buffer controller (CKE) for generating the clock buffer enable signal in response to the first self refresh exit signal (Column 11, lines 23-39); and

a self refresh signal generator (Figure 1, 14) for generating a self refresh signal in response to the self refresh entry signal and the second self refresh exit signal (Column 10, lines 66-67, Column 11, lines 1-3).

Regarding claims 2, 3-4, 11, Taira et al. disclose wherein the self refresh entry signal is synchronized with the external clock signal (Figure 1), and wherein the second self refresh exit signal is synchronized with the external clock signal (Column 6, lines 8-12), and wherein the self refresh entry unit includes: a command buffer (13) for receiving a plurality of command signals to output a plurality of internal command signals; a first clock enable buffer (CKE) for receiving the external control signal to output an internal clock enable signal; a clock buffer (11) for receiving the external clock signal and the clock buffer enable signal (CKE) in order to generate the clock signal; and a self refresh entry command generator (Column 10, lines 55-60) for generating the self refresh entry signal in response to the clock signal, the internal clock enable signal and the plurality of internal command signals.

Regarding claims 12-13, the apparatus discussed above would perform the method claims 12-13.

***Allowable Subject Matter***

5. Claims 5-6,8-10,14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5-6,8-10,14 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Taira et al. (U.S. Patent No. 6,081,468), and others, does not teach the claimed invention having a next clock generator for generating a pulse signal synchronizing with the second clock of the clock signal; and a synchronizing circuit unit for generating the second self refresh exit signal by synchronizing the first self refresh exit signal with the pulse signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2818

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Le  
Primary Examiner  
Art Unit 2818

**THONG LE**  
**PRIMARY EXAMINER**